

REMARKS

Applicants affirm their election without traverse to prosecute the invention of Group I, claims 1-21 and 29-31.

Applicants have amended claims 1, 29, and 30, and have added new claims 32-65.

Claims 1-21 and 29-65, of which claims 1, 29, 30, 41, 60, and 63 are independent in form, are presented for examination.

Information Disclosure Statement

The Examiner has noted that the references designated as "AL" (DE 35 13 119 A1) and "AM" (DT 2 122 165) in the August 6, 2003 Information Disclosure Statement have not been considered because they were not accompanied by a translation, an English abstract, or a statement of relevance. Applicants are submitting an Information Disclosure Statement concurrently with this Reply, in which Applicants provide English abstracts for DE 35 13 119 A1 and DT 2 122 165. Applicants request that the Examiner consider these references and provide confirmation of such consideration.

Claim Rejections – 35 U.S.C. § 102

The Examiner has rejected claims 1-9, 13, 14, 16, 20, and 21 under 35 U.S.C. § 102(b) as anticipated by JP 10-284075 ("Maruta").¹ As amended, claims 1-9, 13, 14, 16, 20, and 21 recite a method of preparing nickel oxyhydroxide, the method comprising combining a nickel hydroxide and a hydroxide salt in a substantially air-free inert atmosphere to form a mixture, and exposing the mixture to ozone to form a nickel oxyhydroxide.

But Maruta does not anticipate claims 1-9, 13, 14, 16, 20, and 21, at least because Maruta does not disclose or suggest combining a nickel hydroxide and a hydroxide salt in a substantially air-free inert atmosphere. Maruta discloses a method of forming a nickel oxyhydroxide that can

¹ The Examiner has provided Applicants with a copy of an English abstract for JP 10-284075, as well as a copy of a machine translation of JP 10-284075. In this Reply, Applicants refer to the JP 10-284075 reference overall as "Maruta", to the English abstract as the "Maruta Abstract", and to the machine translation as the "Maruta Translation".

be used as a cathode active material in an alkaline battery. (See, e.g., Maruta Abstract.) The method includes dispersing nickel hydroxide powder in a sodium hydroxide aqueous solution, while stirring the solution. (See, e.g., id.) Maruta does not disclose that the nickel hydroxide powder and sodium hydroxide aqueous solution are combined in a substantially air-free inert atmosphere. For at least this reason, Maruta does not anticipate claims 1-9, 13, 14, 16, 20, and 21, and Applicants therefore request that the rejection of these claims be reconsidered and withdrawn.

Claim Rejections – 35 U.S.C. § 102 and § 103

The Examiner has rejected claims 10 and 11 as unpatentable over Maruta under either 35 U.S.C. § 102(b) or 35 U.S.C. § 103(a).

Claims 10 and 11 depend from claim 1, and thus are not anticipated by Maruta, at least for the reasons provided above. Furthermore, there is no suggestion to modify Maruta to provide the methods recited by claims 10 and 11. Maruta explains that the nickel oxyhydroxide composition formed by his method (described above) can be successfully used for its intended purpose (as a cathode active material in a battery). For example, Maruta states that, “[I]n the oxy-nickel hydroxide for alkaline cell positive active material . . . which becomes this invention, . . . the cell excellent in the electrochemistry property can be produced.” (Maruta Translation, page 3, ¶ 0019.) Maruta also states that, “[I]ndustrial worth of this invention is size very much.” (Id., ¶ 0028.) After reading these advantages of Maruta’s methods, a person of ordinary skill in the art would not have been motivated to modify Maruta’s methods, let alone to modify Maruta’s methods to provide the methods covered by claims 10 and 11. Accordingly, Applicants request that the rejection of claims 10 and 11 be reconsidered and withdrawn.

Claim Rejections – 35 U.S.C. § 103

The Examiner has rejected claim 12 under 35 U.S.C. § 103(a) as unpatentable over Maruta in view of U.S. Patent No. 5,800,947 (“Köhler”). Claim 12 depends from claim 1 and thus is not rendered obvious by Maruta, at least for the reasons provided above. Furthermore, Köhler does not cure the deficiencies of Maruta. Köhler discloses a Ni/Cd or Ni/hydride storage battery that has a cathode including spherical nickel hydroxide particles. (See, e.g., Köhler, Abstract.) Köhler does not disclose or suggest combining a nickel hydroxide and a hydroxide salt in a substantially air-free inert atmosphere. Thus, Applicants request that the rejection of claim 12 be reconsidered and withdrawn.

The Examiner has rejected claim 17 under 35 U.S.C. § 103(a) as unpatentable over Maruta in view of U.S. Patent No. 5,759,718 (“Yao”). Claim 17 depends from claim 1 and thus is not rendered obvious by Maruta, at least for the reasons provided above. Furthermore, Yao does not cure the deficiencies of Maruta. Yao discloses a cathode that includes cobalt hydroxide. (Yao, col. 4, lines 6-11.) Yao notes that the cathode can be prepared, for example, by mixing cobalt hydroxide with nickel hydroxide and water to form a paste, and adding the paste to a substrate. (See *id.*, lines 12-22.) Yao does not disclose or suggest combining a nickel hydroxide and a hydroxide salt in a substantially air-free inert atmosphere. Thus, Applicants request that the rejection of claim 17 be reconsidered and withdrawn.

The Examiner has rejected claims 15, 18, and 19 under 35 U.S.C. § 103(a) as unpatentable over Maruta in view of JP 2001-202956 (“Kodama”).² Claims 15, 18, and 19 depend from claim 1, and thus are not rendered obvious by Maruta, at least for the reasons provided above. Furthermore, Kodama does not cure the deficiencies of Maruta. Kodama discloses a battery electrode active material that includes a nickel hydroxide and a second component (e.g., a hydroxide) including one of a list of different metals. (See, e.g., Kodama Translation, pages 3-4.) Kodama does not disclose or suggest combining a nickel hydroxide and

² The Examiner has provided Applicants with a copy of an English abstract for JP 2001-202956, as well as a copy of a machine translation of JP 2001-202956. In this Reply, Applicants refer to the JP 2001-202956 reference overall as “Kodama”, and to the machine translation as the “Kodama Translation”.

a hydroxide salt in a substantially air-free inert atmosphere. Accordingly, Applicants request that the rejection of claims 15, 18, and 19 be reconsidered and withdrawn.

The Examiner has rejected claims 29-31 under 35 U.S.C. § 103(a) as unpatentable over Maruta in view of U.S. Patent No. 6,492,062 ("Wang"). Claims 29-31 recite methods of manufacturing a battery, the methods comprising combining a nickel hydroxide and a hydroxide salt in a substantially air-free inert atmosphere to form a mixture, and exposing the mixture to ozone to form a nickel oxyhydroxide. For at least the reasons described above, Maruta does not disclose or suggest the methods recited in claims 29-31. Furthermore, Wang does not cure the deficiencies of Maruta. Wang discloses a battery with a cathode that includes nickel oxyhydroxide (e.g., a cobalt-modified nickel oxyhydroxide or non-fractured nickel oxyhydroxide). (See, e.g., Wang, col. 1, lines 34-40.) Wang does not disclose or suggest combining a nickel hydroxide and a hydroxide salt in a substantially air-free inert atmosphere. Applicants accordingly request that the rejection of claims 29-31 be reconsidered and withdrawn.

New Claims

Applicants have added new claims 32-65. Claims 32-35 depend from claim 29, claims 36-39 depend from claim 30, and claim 40 depends from claim 1. Thus, claims 32-40 are patentable at least for the reasons provided above.

Claims 41-65 recite methods comprising combining a nickel hydroxide and a hydroxide salt in an inert atmosphere that is substantially free of carbon dioxide to form a mixture, and exposing the mixture to ozone to form a nickel oxyhydroxide. None of the above references discloses or suggests the methods of claims 41-65. Thus, Applicants believe that claims 41-65 are in condition for allowance.

Applicants believe that claims 1-21 and 29-65 are in condition for allowance, which action is requested.

Applicant : Paul A. Christian et al.
Serial No. : 10/086,807
Filed : March 4, 2002
Page : 14 of 14

Attorney's Docket No.: 08935-255001 / M-4975

Please apply any charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: SEPTEMBER 24, 2004

Tu N. Nguyen

Tu N. Nguyen
Reg. No. 42,934

Fish & Richardson P.C.
225 Franklin Street
Boston, MA 02110-2804
Telephone: (617) 542-5070
Facsimile: (617) 542-8906